

Amendments to the Claims:

Please cancel claims 1-127, 139-201, and 206-338, and add claims 339 –342. This listing of claims will replace all prior versions, and listings, of claims in this Application.

Listing of Claims:

1-127. (Cancelled)

128. (Original) A method for locating a preferred positioning for a prosthesis in a target implant location, comprising:

- (a) locating a first plane within the target location in the transverse direction; and
- (b) locating a second plane within the target location in the sagittal direction,

wherein the first and second planes intersect to define a line along which a preferred position for locating the prosthesis can be determined.

129. (Original) The method of claim 128 further comprising positioning a fixture such that it is collinear with the line, and such that said fixture may be used to position instruments for preparation of the target location for implantation of the prosthesis at the preferred position.

130. (Original) The method of claim 128, wherein the locating the first second planes further comprises:

(a) using anatomical features as reference points to position a first tool to locate the first plane which defines the preferred transverse position for the center of the prosthesis;

(b) positioning a second tool with respect to the preferred transverse position; and

(c) using the second tool to locate the second plane which defines the preferred sagittal position for the center of the prosthesis, wherein the intersection of the preferred transverse position and the preferred sagittal position defines the line along which a preferred position for locating the center of the prosthesis can be determined.

131. (Original) The method of claim 130 wherein said anatomical features border the surgical site.

132. (Original) The method of claim 130 wherein said second tool is positioned with respect to the preferred transverse position by marking the preferred transverse position and using said mark to guide the positioning of the second tool.

133. (Original) The method of claim 130 wherein said first and second tools are the same instrument.

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134. (Original) The method of claim 130 wherein the prosthesis is an intervertebral disc prosthesis and the preferred positioning of the center of the prosthesis is the lateral and caudal-cephalad anatomical center of the intervertebral disc space.

135. (Original) The method of claim 130 wherein the prosthesis is an intervertebral disc prosthesis and said method further comprises determining the preferred position for the center of the prosthesis by identifying a position along the line that positions the anterior edge of the prosthesis substantially tangent to the anterior edge of one of the adjacent vertebral bodies.

136. (Original) The method of claim 130 wherein the prosthesis is an intervertebral disc

prosthesis and said method further comprises determining the preferred position for the center of the prosthesis by identifying a position along the line that positions the posterior edge of the prosthesis at least 1 mm anterior to the posterior edge of the disc space.

137. (Original) A system for positioning instruments within a patient's intervertebral disc space relative to a reference line, comprising:

- (a) a first instrument for locating and marking a transverse center of the disc space;
- (b) a second instrument for determining a sagittal center of the disc space that intersects with the transverse center;
- (c) an angle orienting instrument for adjusting the second instrument to be collinear with the reference line, which is positioned at a predetermined angle relative to a gravitational vector; and
- (d) a machining fixture that is positioned with the second instrument relative to the reference line, and which is adapted to position additional instruments relative to the reference line.

138. (Original) A system for positioning instruments relative to a line during spinal surgery, comprising:

- (a) a first instrument for determining a first point in a first plane and for indicating the position of the first point by marking a vertebral body;
- (b) a second instrument adapted to be positioned relative to the mark for adapted for locating a second plane substantially perpendicular to the first plane, wherein the first and second planes intersect to form a line;

(c) a fixture adapted to be temporarily affixed to a vertebral body such that it is collinear with the reference line, and adapted to position site preparation instruments relative the line.

139.-201. (Cancelled)

202. (Original) A method for locating a preferred implant location for a spinal intervertebral disc prosthesis and for preparing the spinal disc space for receiving the prosthesis, comprising:

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- (a) determining an angle that defines the relation of the disc space relative to a gravitational vector;
 - (b) stabilizing a frame over a general area of the disc space using an operating room table as a fixed base;
 - (c) determining a preferred transverse position for locating the prosthesis within the disc space using a transverse positioning tool;
 - (d) marking the preferred transverse position of the disc space;
 - (e) determining the preferred sagittal position for locating the prosthesis within the disc space, comprising:
 - (1) aligning a sagittal positioning tool with respect to the marked transverse position;
 - (2) determining the preferred location of the sagittal positioning tool, which is the location at which an axis of the sagittal positioning tool is at an angle relative to the gravitational vector that is

substantially equal to the angle that defines the relation of the disc space relative to the gravitational vector;

- (f) orienting a guide with respect to the preferred location of the sagittal positioning tool such that an axis of the guide is substantially parallel to said axis of the sagittal positioning tool;
- (g) anchoring the guide to the frame and to the vertebral bodies bordering the disc space; and
- (h) inserting site preparation tools through the guide to prepare the disc space for receiving a prosthesis, wherein the guide interfaces with the site preparation tools to control their position relative to the disc space and the adjacent vertebral bodies.

203. (Original) The method of claim 202 further comprising using a bubble level in cooperation with the transverse and sagittal positioning tools to locate the preferred positions for said tools.

204. (Original) The method of claim 202 wherein the guide has a connecting interface that corresponds to a connecting interface of the sagittal positioning tool and of the site preparation tools.

205. (Original) The method of claim 202, wherein the guide is anchored to the frame using clamps and anchored to the disc space by screws inserted at holes at a base of the guide.

206-338. (Cancelled)

339. (New) A method for positioning one or more instruments for preparing a space between two vertebral bodies to receive an articable prosthesis, the method comprising:

surgically exposing at least a portion of the space between the two vertebral bodies into which the articable prosthesis will be placed;

inserting a first tool into the space for locating a first plane through the space in an axial direction;

inserting a second tool into the space for locating a second plane through the space in a sagittal direction;

positioning a fixture collinear with a reference line defined by the intersection of the first and second planes, wherein the fixture is adapted for positioning the one or more instruments relative to the reference line.

340. (New) The method of claim 339 wherein the first and second tools are the same tool.

341. (New) The method of claim 339 wherein locating the first plane comprises marking an anterior surface of one of the two vertebral bodies.

342. (New) The method of claim 341 wherein marking the anterior surface of one of the two vertebral bodies includes marking the anterior surface of one of the two vertebral bodies with a pointed pin.

343. (New) The method of claim 341 wherein marking the anterior surface of one of the two vertebral bodies includes marking the anterior surface of one of the two vertebral bodies with sterile ink.

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Cancel 344. (New) The method of claim 339 further comprising removing bone from one of the vertebral bodies with the one or more instruments to prepare the vertebral body for receiving the articable prosthesis.
